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IMPROVING THE SOCIAL BEHAVIOR OF YOUNG, EDUCABLE MENTAL RETARDATES. FINAL REPORT.

BY- ROSS, SHEILA
PALO ALTO MEDICAL RESEARCH FOUNDATION, CALIF.

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DESCRIPTORS- *EXCEPTIONAL CHILD RESEARCH, *MENTALLY HANDICAPPED, *BEHAVIOR, *COGNITIVE PROCESSES, EDUCABLE MENTALLY HANDICAPPED, SOCIAL CHANGE, INTERPERSONAL COMPETENCE, TRAINING TECHNIQUES, INSTRUCTIONAL MEDIA, LOGICAL THINKING,

TO INCREASE THE YOUNG EDUCABLE MENTAL RETARDATE'S KNOWLEDGE OF APPROPRIATE SOCIAL RESPONSES, A TRAINING PROGRAM WAS DESIGNED UTILIZING THE PRACTICAL SYLLOGISM. SUBJECT GROUPS, AGED 8-9 TO 10-3, INCLUDED (1) 32 EDUCABLE MENTAL RETARDATES WITH A MEAN IQ OF 66, DIVIDED INTO CONTROL AND EXPERIMENTAL GROUPS OF 16 EACH, (2) 16 AVERAGE CHILDREN WITH IQ'S OF 90 TO 110 OR IN THE 50TH TO 60TH PERCENTILE ON GROUP READINESS AND ABILITY TESTS, AND (3) 16 ABOVE AVERAGE CHILDREN WITH IQ'S OF 125 TO 145 OR ABOVE THE 90TH PERCENTILE ON THE SAME GROUP TESTS. BOTH THE RETARDED GROUPS WERE GIVEN 120 TRAINING INCIDENTS USING DOLL PLAY, LIVE MODELS, PUPPETS, AND FILM SLIDES. TRAINING FOR THE EXPERIMENTAL (E) GROUP WAS IN RESPONSES TO SIX COMMON TYPES OF SOCIAL SITUATIONS SUCH AS ASKING FOR ASSISTANCE OR RESPONDING TO DISAPPROVAL. TRAINING FOR THE CONTROL (C) GROUP WAS IN VERBAL AND PROBLEM-SOLVING SKILLS. THE AVERAGE GROUP RECEIVED NO TRAINING. PRETESTS AND POSTTESTS MEASURED LOGIC AND SOCIAL BEHAVIOR. RESULTS INDICATED THAT (1) AFTER TRAINING THE E-GROUP WAS SIGNIFICANTLY HIGHER THAN THE C-GROUP ON LOGICAL THINKING (P LESS THAN .05) AND SOCIAL BEHAVIOR (P LESS THAN .0005), (2) ALTHOUGH THE C-GROUP SCORED LOWER THAN THE E-GROUP AFTER TRAINING, IT SCORED SIGNIFICANTLY HIGHER AFTER TRAINING THAN BEFORE ON LOGICAL THINKING (P LESS THAN .05) AND SOCIAL BEHAVIOR (P LESS THAN .01), (3) BEFORE TRAINING THE RETARDED GROUPS SCORED SIGNIFICANTLY LOWER THAN THE AVERAGE GROUP ON LOGIC (P=.001) AND SOCIAL BEHAVIOR (P=.0005), AND (4) AFTER TRAINING THE E-GROUP SCORED SIGNIFICANTLY LOWER THAN THE AVERAGE GROUP ON LOGIC (P LESS THAN .005) BUT HIGHER ON SOCIAL BEHAVIOR (P LESS THAN .05). RESULTS THUS CONFIRMED THE HYPOTHESES THAT (1) RETARDED CHILDREN HAVE LESS SKILL IN LOGICAL THINKING AND KNOWLEDGE OF SOCIAL BEHAVIOR THAN AVERAGE CHILDREN, AND (2) WITH TRAINING, RETARDED CHILDREN CAN IMPROVE IN LOGICAL THINKING AND MAY REACH OR SURPASS THE LEVEL OF AVERAGE CHILDREN IN KNOWLEDGE OF SOCIAL BEHAVIOR IN SPECIFIC COMMONLY OCCURRING SITUATIONS. (AA/MY)

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Project No. 6-8149
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Sheila Ross

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The Palo Alto Medical Research Foundation

Palo Alto, California

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Introduction

The young, educable, mentally retarded child experiences major difficulty in social behavior at play (3,4) and later, at work (2). The reasons for this difficulty are associated with his intellectual deficiency, but the deficiency does not rule out the possibility of his learning social skills, instead, it makes additional requirements of the learning situation.

Why does the retarded child have difficulty in exhibiting appropriate social behavior? Skill in perception of the realities and demands of a social situation is a learned function. At the preschool level, much of this skill is the result of incidental learning. Most children acquire a certain level of social skill from informal play contacts with other children, with control by adults being introduced only in extreme situations such as in the occurrence of physical aggression. The retarded child does not acquire an adequate degree of social skill in informal play contacts. There are two main reasons for this failure. First, even in the preschool years the situations in which the incidental learning of social skills should occur are complex, occur rapidly, have little, if any, repetition in the sequence of events, and are part of a larger context containing many distracting stimuli. When the retarded child reaches school age, opportunities for these early learning experiences occur only occasionally, the other children having progressed far beyond this stage of social development. Second, the retarded child participates in fewer informal play situations than does the young normal child. Because of preconceptions regarding the retarded child's capabilities, parents and teachers tend to provide him with a sheltered environment, give him special treatment, limit the demands made upon him, anticipate consequences for him, and protect him from the results of his actions.

In addition to limiting the opportunities the retarded child has for learning social skills, the sheltered environment deprives him of opportunities for seeing the effects his actions have on other people. His expectancies concerning the outcome of social interchange are largely unformulated. There is no existing cognitive framework against which to test possible alternate responses and, consequently, there is little reality testing. Under these circumstances, it is difficult for the retarded child to learn to reason logically in specific social situations.

In informal play with other children, the retarded child is at a serious disadvantage. He has few skills learned incidentally through imitation of peers (and the calibre of his peers as models becomes increasingly low as his social skill falls farther behind that of his chronological peers) and he has no general background of logical thought resulting from informal play experiences with

other children and from intentional training by adults. As a result, when he does participate in an informal play situation, he is likely to experience failure.

The research described in this report was designed to increase the young, educable, mentally retarded child's knowledge of appropriate social behavior by means of a training program in which social skills were taught within the framework of the practical syllogism.

The following hypotheses were tested:

(1) Retarded children have a lower level of skill in both logical thinking and knowledge of social behavior than do children of average intelligence.

(2) With training, retarded children can improve in logical thinking but they are unlikely to reach the level of children of average intelligence.

(3) With training, retarded children can improve in knowledge of social behavior and may reach or surpass the level of children of average intelligence.

Method

Subjects: Three groups of subjects (Ss) who differed in level of intelligence participated in this experiment. All Ss were free of gross motor, sensory, and emotional defects and were not on any medication that could influence their learning ability.

The 19 boys and 13 girls in the first group were mentally retarded. They ranged in chronological age (C.A.) from three years, 11 months, to 10 years, one month. These Ss attended the preschool and primary classes for the educable mentally retarded in the Children's Health Council of Palo Alto, the Redwood City Schools, and the Palo Alto Schools. These 32 Ss were randomly assigned to the Experimental Group (n = 16) and to the Control Group (n = 16). All 32 Ss had been given the Stanford-Binet Intelligence Test, Form L-M, or other equivalent measure.

The Ss in the second group were of average intelligence. The six boys and 10 girls in this group were enrolled in the Bing Nursery School and the Redwood City Schools. They ranged in C.A. from four years, three months, to 10 years, three months, with a mean of 83.06 months and a SD of 19.13 months. The preschool Ss (n = 3) in this group all had scores between 90 and 110 on the Stanford-Binet Intelligence Test or other equivalent measure. The elementary school Ss (n = 13) all scored between the 50th and 60th percentiles on standardized group test batteries of readiness and ability given throughout the school system. This group will be referred to as the Average Group.

The Ss in the third group were above average in intelligence. The nine boys and seven girls in this group were enrolled in the same schools as the Ss in the Average Group. They ranged in C.A. from three years, nine months, to nine years, three months, with a mean of 84.69 months and a SD of 17.01 months. The Ss in this group were selected on the basis of the same tests as the Ss in the Average Group. The criteria for selection were IQ scores in the 125-145 range for the preschool Ss (n = 2) and scores above the 90th percentile on the test batteries for the elementary school Ss (n = 14). This group will be referred to as the Above-Average Group. Table 1 contains the descriptive statistics on the four groups.

Measures: One set of measures, the Logical Thinking Tests, was administered to all four groups. A second set, the Social Behavior Tests, was administered to the Experimental, Control, and Average Groups. This second set was not administered to the Above-Average Group because the scores from the Average Group, only, were to be used for comparison with the post-training scores of the Experimental Group. Copies of all the tests are contained in Appendix C.

Table 1

Descriptive Statistics on the Four Groups

Group	n	CA in mos.		Sex		MA in mos.		IQ		Pre-train. Log.Think.		Pre-train. Soc. Beh.	
		M	SD	M	F	M	SD	M	SD	M	SD	M	SD
Experimental	16	88.38	19.04	9	7	58.74	14.21	66.75	10.42	7.00	3.82	9.25	6.71
Control	16	92.31	16.96	10	6	61.06	14.13	66.06	9.13	6.63	3.77	7.81	7.33
Average	16	83.06	19.13	10	6	(50th to 60th Percentile)				15.69	1.49	26.25	10.96
Above-Average	16	84.69	17.01	9	7	(90th Percentile and up)				16.75	1.68	--	--
F ratio (CA)	64	0.78 n.s.											

Logical Thinking Tests: This set of measures was presented in the format of the practical syllogism: If you do X, Y will occur. You do (or do not do) X. What happens? This format was used with three different media: picture stories (Logic Test 1), doll play stories (Logic Test 2), and puppet stories (Logic Test 3). Each test contained six items. Parallel story sets (Set 1 and Set 2) were prepared for each of the three Logic Tests. Within each group, half of the Ss were given Set 1 as a pre-test and Set 2 as a post-test, the order of presentation being reversed for the other half of the Ss.

The difficulty level of the tests varied. The picture stories were simplest in that the premises and consequences were clearly stated and the situations were familiar and realistic to the children. The doll play stories required the child to identify an unstated consequence. However, the situations were familiar ones and several different responses were acceptable for any one situation. (The doll play technique was valuable because it enabled the children who were less verbal to show what happened next as well as to tell about it.) The puppet stories were more difficult because, although the premises and consequences were clearly stated, the situations were less realistic and less familiar to the children.

Social Behavior Tests: The stories in this set of measures all concerned behavior appropriate to specific social interactions and knowledge of simple logic (the if-then of the syllogism) was not essential in answering the items. Social Test 1 (Doll Play) consisted of 10 doll play items and Social Test 2 (Live Models) consisted of 10 items acted out by two adults. Both tests required the S to state what should happen in the situation.

Administration of the measures: The measures were administered individually to each S in six sessions. The Experimenter (E) told the story and recorded the response (picture and doll play stories), told the story and recorded the response while an assistant worked the puppets on a small stage (puppet stories), and acted out the story with an assistant (live model stories). The latter test required two sessions for administration. There were no difficulties in recording the Ss' answers because in most cases the answers were brief. A check on the accuracy of recording was made by having two assistants record at the same time as the E. Agreement was at the 97 percent level. Disagreements were the result of the unclear speech of some Ss rather than of inability on the part of the recorder to keep an accurate written record of responses. In all cases of disagreement, one observer was unsure of the response but the other observers were sure and were in agreement. The response recorded by the latter observers was the response which was subsequently scored.

Scoring the measures: The Logical Thinking Tests 1, 2, and 3, each had six items worth a total of six points. A total of 18 points was possible for the three sets of stories. The Social Behavior Tests 1 and 2 each had 10 items with a variable number of points depending on the degree of completeness of the answers. For example, an apology was a one-point answer, whereas an apology plus retribution was a two-point answer.

The reliability of the scoring was determined by having a trained assistant mark duplicate tests having neither subject nor group identification. Five of each of the five tests were selected randomly from the tests of each of the following groups, Experimental, Control, and Average. The tests of the Above-Average Group were not included because the answers were almost identical to those of the Average Group. Correlation between scorers was .98. Omissions were not scored as agreement. Disagreements were discussed in terms of the scoring standards which had been set up for marking all of the tests in the study. The scoring standards were explicit so that all disagreements were resolved and were consistent with the established scoring standards.

The Training Program: The Experimental Group took part in the Logic Training Program and the Control Group took part in the Creative Multi-Media Program, both of which are described below:

The Logic Training Program was designed to teach the S to handle six types of situations:

(1) Accidentally injuring someone or damaging property.

(2) Wanting something that someone else has.

(3) Intentionally injuring someone or damaging property.

(4) Expressing disapproval of others' behavior.

(5) Responding to disapproval from others.

(6) Asking for assistance.

For each of the six situations, 20 incidents following the if-then format were prepared. For example, in an incident from Situation 1, accidentally injuring someone or damaging property, Child A breaks Child B's toy, admits the damage, and apologizes. This incident was presented in terms of, "If A breaks B's toy, then A says he is sorry and tries to repair it." In approximately half of the 20 incidents, the character in the incident gave a negative response (for example, does further damage to the toy and runs away). The consequences of negative responses were then described (for example, B might retaliate, or refuse to play with A). The 20 incidents were presented using four different media:

live model, doll play, puppets, and film slides. The actors or characters included doll children and doll adults, animal puppets and child puppets, and live adult models. A total of 120 incidents was prepared for the Logic Training Program. A copy of the complete program is contained in Appendix A.

Procedure in the Logic Training Program: In the first training session, each S saw five incidents by himself. Following this first session, two or more Ss at a time participated in each session and completed no more than six incidents. Each session lasted 15 to 20 minutes and each S had approximately 20 sessions spread over a two-month period. The Ss were brought into the experimental room and seated at a small table with the E. E selected six incidents: for example, two from Situation 1, two from Situation 2, and two from Situation 3, and used no more than two media for the six incidents. For each item, E said, "Watch what Bob and Billy do," and described the action with accompanying movements of the dolls. E then said, "If you hit someone, you should say you are sorry. When Bob hit Billy, what should Bob say? If S hit (names the other S), what should he say?" E asked similar questions of each S, making sure that each S repeated the appropriate verbal response for the situation.

The Creative Multi-Media Program was designed to provide the Control Group with equal time with the E, equal exposure to the four different media (all of which were used subsequently in the post-training testing), and practice in responding to questions. The procedure for each session was similar to that of the Logic Training Program. The Ss worked through 120 incidents having the same characters and props as the 120 incidents in the Logic Training Program, but differing in the activities of the characters. For example, Incident #16 for Situation 1 (Accidentally injuring someone or damaging property) with Live Model medium was as follows:

> A asks B if A can borrow a crayon to print a sign. B says A can borrow the crayon and A starts the sign. A presses too hard, breaking the crayon. B says, "Oh, you broke my crayon." A says, "I'm sorry I broke it. I'll buy you a new crayon." B says, "That's fine. You said you were sorry and you offered to buy me a new crayon, so you can still use my crayons."

In the Creative Multi-Media Program, this incident became:

> A asks B if A can borrow a crayon to print a sign. B says, A can borrow the crayon and A starts the sign and prints JUNGLE. A then asks the S what things could go in a picture about a jungle and draws them in as the S suggests them.

In order to justify having the Control Ss spend the same amount of time in the research as the Experimental Ss, the Creative Multi-Media program was designed to give practice in simple problem-solving and to increase the Ss' verbal skills. No before-and-after measures were made of the effectiveness of this procedure because the purpose of the study was to determine the effectiveness of training in social behavior within a logic framework. However, tapes were made for several of the Control Ss at intervals throughout the Program and it was apparent that the ability to verbalize increased markedly. Appendix B contains the complete Creative Multi-Media Program.

Motivation: Although the Ss in both groups were enthusiastic about coming to the experimental room whenever they were asked to do so, it was felt that some reinforcement for correct verbalizations by the Experimental Ss and for "good" answers or ideas by the Control Ss would provide additional motivation to verbalize. For each S, a card marked with 30 squares was kept and brought out for every session. As the S responded to an incident, the E marked a star in one square. The S was told that when the card was filled he could choose a prize to keep and take home. When the first card was half filled, the S was shown the assortment of prizes, which were 10 cent toys with high appeal (helicoptors with moving propellors, miniature tea-sets, etc.). The Ss took great interest in the progress they made on the cards. Each S earned four prizes. No prizes were given to any S following the pre-training tests, post-training tests, or retention tests.

Following the completion of the Logic Training and Creative Multi-Media Programs, the Logical Thinking Tests and the Social Behavior Tests were administered to the Experimental and Control Groups.

Retention measures were obtained on the Social Behavior Tests. Half of the Experimental Ss from each school setting, plus one extra S (in case of absenteeism within the test period), were randomly selected for the Retention Group (n = 9). For a number of reasons beyond the control of E, the length of time between the post-training tests for each S and the retention tests varied greatly, from 14 to 69 days for Social Test 1 and from 20 to 94 days for Social Test 2.

Schematically, the experimental procedures for the entire experiment were as follows for the four groups:

Experimental Group (n=16)	Control Group (n=16)	Average Group (n=16)	Above-Average Group (n=16)
Logical Think. Tests 1,2,3	Logical Think. Tests 1,2,3	Logical Think. Tests 1,2,3	Logical Think. Tests 1,2,3
Social Behav. Tests 1,2	Social Behav. Tests 1,2	Social Behav. Tests 1,2	---
Logic Train. Program	Creative Multi-Media Program	---	---
Logical Think. Tests 1,2,3	Logical Think. Tests 1,2,3	---	---
Social Behav. Tests 1,2	Social Behav. Tests 1,2	---	---
Retention on Social Behav. Tests 1,2 (n=9)	---	---	---

Results

The results of this study provide strong support for the hypothesis that retarded children have a lower level of skill in both logical thinking and social behavior than do children of average intelligence. A comparison of the pre-training scores of the combined Experimental and Control Group (n = 32) with those of the Average Group (n = 16) shows that the Average Group scored higher on the Logical Thinking and the Social Behavior Tests. These results are contained in Table 2.

There was a marked ceiling effect for the Above-Average Group on the Logical Thinking Tests, with nine of the Ss in this group having perfect scores as compared to one S in the Average Group having a perfect score. Because of the ceiling effect, the only comparison made using the Above-Average Group's scores was between this group ($M = 16.75$, $SD = 1.68$) and the Average Group ($M = 15.69$, $SD = 1.49$) and the means did not differ.

The Social Behavior Tests were not administered to the Above-Average Group because the purpose of the training program was to reduce the discrepancy between the retarded Ss and the average Ss on logical thinking and social behavior. The scores of the Average Group provided the goal for the training of the retarded Ss. Since the problem of too low a ceiling did not apply to the Social Behavior Tests, it is likely that the Above-Average Group would have scored higher on these measures than did the Average Group.

The hypothesis was confirmed that, with training, the retarded child can improve in both logical thinking and knowledge of appropriate social behavior. A comparison of the post-training scores of the Experimental and Control Groups shows a marked difference between the two groups. The Experimental Group was significantly higher on both the Logical Thinking Tests ($t = 1.92$, $p < .05$)* and the Social Behavior Tests ($t = 4.57$, $p < .0005$).* A further analysis of the scores showed that although the Control Group scored lower than the Experimental Group, their post-training scores were higher than their pre-training scores on both the Logical Thinking Tests ($t = 2.39$, $p < .05$)** and their Social Behavior Tests ($t = 3.37$, $p < .01$).**

The expectation that the Experimental Group would improve in logical thinking but would not reach the level of the Average Group was confirmed. A comparison of the post-training Logical Thinking scores of the Experimental Group with those of the Average Group showed that the Average Group was superior on this measure ($t = 3.15$, $p < .005$).*

*One-tail test
**Two-tail test

Table 2

Comparison of the Pre-training Scores of the Experimental and Control Groups with those of the Average Group

Group	n	Logical Thinking Tests				Social Behavior Tests			
		M	SD	t	p*	M	SD	t	p*
Experimental and Control	32	6.83	7.06	11.43	.0001	8.53	3.80	5.40	.0005
Average	16	15.69	1.49			26.25	10.96		

*One-tail test

The data provide strong support for the hypothesis that with training, the Experimental Group could equal or surpass the Average Group on the Social Behavior Tests. For this comparison the Ss in the two groups were matched on C.A. A paired t-test showed that the post-training scores of the Experimental Group were significantly higher ($t = 1.95$, $p < .05$)*. Table 2a contains the comparisons of the post-training scores of the Experimental Group with the post-training scores of the Control Group and the scores of the Average Group. **

A retention test conducted on nine Ss in the Experimental Group showed no differences between their post-training and retention scores and this finding held up even when the scores of the five Ss having the longest retention interval (Mean = 61 days, range = 43 to 94 days) were compared. The data presented in Table 3 show that the nine Ss who participated in the retention measures were representative of the larger Experimental Group.

Table 2a

Comparison of Post-training Scores of the Experimental Group with those of the Control and Average Groups

		Logical Thinking Tests				Social Behavior Tests			
Group	n	M	SD	t	p*	M	SD	t	p*
Experimental	16	12.36	3.82	3.15	.005	32.13	13.99	1.95	.05
Average	16	15.69	1.49			26.25	10.96		
Experimental	16	12.36	3.82	1.92	.05	32.13	13.99	4.57	.0005
Control	16	9.19	5.18			12.69	8.71		

* One-tail test.

**A copy of the raw scores may be obtained from the principal investigator upon request.

Table 3

Descriptive Statistics for Retention Group and Experimental Group

Group	n	C.A. in mos. M	C.A. in mos. SD	C.A. in mos. t	M.A. in mos. M	M.A. in mos. SD	M.A. in mos. t	IQ M	IQ SD	IQ t	Post-training Soc. Behav. M	Post-training Soc. Behav. SD	Post-training Soc. Behav. t	Retention Soc. Behav. M	Retention Soc. Behav. SD
Retention	9	86.22	23.48	n.s.	59.11	15.13	n.s.	69.00	8.33	n.s.	33.22	16.01	n.s.	32.89	13.33
Experimental	16	88.38	19.04		58.74	14.21		66.75	10.42		32.13	13.99		--	--

Discussion

The Logic Training Program resulted in significant increases in the post-training Logical Thinking and Social Behavior Test scores of the Experimental Group, indicating that the program was an effective one. Although there was no empirical basis for deciding on a total of 120 incidents, the number appeared to be a reasonable one for the content of the training program. In a number of cases, the Ss did not appear to be making noticeable progress until they had completed approximately 100 incidents, at which point a marked change occurred in their ability to give correct responses without help from the E. It would appear that 120 incidents is the minimum number for a program of this type.

The retention scores for the Social Behavior Tests provided additional support for the conclusion that the program was an effective one. One possible explanation for the satisfactory retention scores was that the Ss discovered the utility of the responses. Adults and other children reacted positively to the Ss when the latter used the responses for handling situations covered in the training program. No measures were obtained of the effects of the training program on behavior outside the experimental setting because free-play activities varied so greatly among the three settings from which the Experimental Ss came that it would have been extremely difficult to obtain comparable objective ratings of social behavior on the playground. However, an encouragingly large number of instances were observed in which Ss in the Experimental Group used, with successful results, responses that they had learned in the program.

The Training Program appeared to be more effective for social behavior than for logical thinking. Although the post-training scores for both areas showed significant increases, the improvement in knowledge of social responses was particularly impressive. One explanation for the difference in extent of improvement concerns the characteristics of the two sets of material. Logical thinking, with the if-then format of the syllogism, is somewhat abstract, so that the ability to reason within this format is possibly related to intelligence. (It should be noted that the Above-Average Group was included in this study to determine if this hypothesis had an empirical basis. However, the ceiling on the tests was too low for the tests to accommodate the above-average Ss, the problem being that the tests also had to be somewhat within the range of the retarded Ss.) By contrast, the social behavior in the training program was concerned solely with concrete situations requiring rote memory of specific responses. It would appear that level of intelligence should be of less importance here.

A second explanation concerns a difference in emphasis within the training program. In each session with the Experimental

Group, the primary emphasis was on learning the correct social response. The if-then format, although used in every incident, did not receive the same emphasis. The S was not required to verbalize the if-then aspects of each incident and there was no repetition by the E. In view of the differences in emphasis, the logical thinking could be regarded as incidental learning and the social behavior, as intentional learning. The finding by Denny (1) that young retarded children are less proficient at incidental learning than at intentional learning provides support for this explanation.

While it is undoubtedly an easier task to teach a retarded child specific responses to unambiguous and concrete situational demands than it is to teach him the more abstract reasoning of the if-then sequence, it is possible that a greater improvement could have occurred in the post-training logic scores of the Experimental Group if the if-then sequence had been emphasized to the same extent as the social behavior content. The real problem in this latter procedure is that the formal if-then presentation does not fit comfortably into colloquial speech. It is cumbersome procedure to describe an incident and then to repeat it using the format, "If A hits B, then A must say he is sorry. A does hit B. What must A say?" This sequence is implied but not stated in the comment, "A hit B, what should A do now?", and it is apparent that the retarded Ss would have benefited from direct rather than implied statements.

The most important finding in this study is that the post-training social behavior scores of the Experimental Group were significantly higher than the scores of the Average Group. One criticism that could be made of this finding concerns the procedure of comparing a group that has just completed a training program (and so presumably is at a peak on the particular skills involved) with a group that has not had the benefit of the training program. However, an examination of the situations, behaviors, and responses in the test items shows that all were familiar ones requiring responses that children of average intelligence and of the age range in this study should have acquired from the long-term direct and indirect training by adults and peers to which they had been exposed. That the retarded Ss had not benefited from, or perhaps had not been subjected to, the direct and indirect training of adults and peers in respect to the common social behaviors measured by the tests is apparent from a comparison of the pre-training Social Behavior Test scores of the Experimental Group and the scores of the Average Group.

It was expected that the post-training scores of the Experimental Group would show a significant increase over their pre-training scores, but the improvement of the Control Group on both logical thinking and social behavior scores was unexpected. It is possible that the improvement could be attributed to participation

in the Creative Multi-Media Program. The purpose of this Program was to match as closely as possible the experience of the Control Group with that of the Experimental Group on aspects other than those directly concerned with the dependent variables. The Ss were in a situation providing practice in general problem-solving skills: they were required to listen to the statement of a problem, respond verbally, and offer alternative responses. They became accustomed to the question-answer routine with questions presented in a series, by means of different media, and with the expectation on the E's part that they would answer the questions. The general problem-solving behavior or set was very similar to that required for satisfactory behavior in test situations.

To establish empirically that the training program did have the effect suggested above, it would be necessary to have an additional group of retarded children matching the retarded groups in this study. This group would have only the pre-training and post-training tests, with no intervening training other than their regular school routine. Since the primary concern in the study was with the effects of the training program for the Experimental Group, more intensive study of the effects of the training program for the Control Group was not warranted.

Conclusions and Implications

The following conclusions are drawn from this study:

(1) The young, educable, mentally retarded children in this study were far behind their chronological pears of average intelligence in knowledge of (a) appropriate responses to specific, common, social situations and (b) the syllogism form of logical thought.

(2) With training, the retarded children in the Experimental Group were able to improve significantly in both knowledge of appropriate social behavior and logical thinking. The improvement in knowledge of appropriate social behavior brought the scores of this group to a point significantly above that of the scores of the Average Group. The level of improvement reached by the Experimental Group was maintained over time in retention tests made on nine of the Ss from this group.

(3) The Control Group, following participation in the Creative Multi-Media Program, also improved significantly in both knowledge of appropriate social behavior and logical thinking, but as was to be expected, the level of improvement in both areas was significantly below that attained by the Experimental Group.

The following implications are drawn from the data:

(1) The young, educable, mentally retarded child in a school setting would benefit from the inclusion in the curriculum of a formal training program designed to improve his knowledge of appropriate responses to social situations.

(2) Data from the assessment of children of average intelligence would be useful in providing goals for the training of retarded children, particularly in the area of non-academic skills. In the present study, the value of the findings concerning the increase in knowledge of social skills of the Experimental Group following the training program was increased by having available the data on the level of performance of the Average Group.

Summary

The young, educable, mentally retarded child experiences major difficulty in social behavior. The reasons for this difficulty are associated with his intellectual deficiency, but the deficiency does not rule out the possibility of his learning social skills. Skill in perception of the realities and demands of a social situation is a learned function. At the preschool level, much of this skill is the result of incidental learning acquired in informal play with other children. The retarded child has difficulty in acquiring incidental learning in informal play because the situations are complex, occur rapidly, have little, if any, repetition, and are part of a larger context containing many distracting stimuli.

The opportunities for informal play are limited for the retarded child. Because of preconceptions regarding his capabilities, adults tend to give him special treatment, limit the demands made on him, anticipate consequences for him, and protect him from the results of his actions. Consequently, the retarded child lacks opportunities to learn what effects his actions are likely to have on other people and his expectancies concerning the outcome of social interchange are largely unformulated.

The research described in this report was designed to increase the young, educable, mentally retarded child's knowledge of appropriate social behavior by means of a training program in which social skills were taught within the framework of the practical syllogism.

The following hypotheses were tested: (1) Retarded children have a lower level of skill in both logical thinking and knowledge of social behavior than do children of average intelligence. (2) With training, retarded children can improve in logical thinking but they are unlikely to reach the level of children of average intelligence. (3) With training, retarded children can improve in knowledge of social behavior and may reach or surpass the level of children of average intelligence.

Three groups of Ss, mentally retarded, average, and above average, participated in this experiment. The 32 mentally retarded Ss were randomly assigned to the Experimental Group and given training in social and logic skills, or to Control Group for practice in simple problem-solving. The Average Group (n = 16) provided test data that were used as a basis for evaluating the progress of the Experimental Group following the latter's participation in the training program. The Above-Average Group (n = 16) was included to provide test data on logical thinking.

The results showed that retarded children have a lower level of skill in both logical thinking and social behavior than do children of average intelligence. With training, the Experimental Group were able to improve significantly in both knowledge of appropriate social behavior and logical thinking. The improvement in knowledge of appropriate social behavior brought the mean score of this group to a point significantly above that of the Average Group. The level of improvement was maintained over time in retention tests made on nine of the Ss from this group. The Control Group's post-training social behavior and logical thinking scores also improved significantly, but the level of improvement in both areas was significantly below that attained by the Experimental Group.

The implications drawn from the data are that the mentally retarded child in a school setting would benefit from the inclusion in the curriculum of a formal training program designed to improve his knowledge of appropriate social behavior and that data from the assessment of children of average intelligence is of value in providing goals for the training of retarded children, particularly in the area of non-academic skills.

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Appendix A

Training Program for Experimental Group

TRAINING PROGRAM FOR EXPERIMENTAL GROUP

ITEM SUMMARY

GENERAL BEHAVIOR		MEDIA				
		Doll Play	Slides	Puppets	Doll Play	Live Model
I.	Accidentally injuring someone or damaging property	1-3	4,5	6-10	11-15	16-20
II.	Wanting something that someone else has	21-23	24,25	26-30	31-35	36-40
III.	Intentionally injuring someone or damaging property	41-43	44,45	46-50	51-55	56-60
IV.	Expressing disapproval of others' behavior	61-63	64,65	66-70	71-75	76-80
V.	Responding to disapproval from others	81-83	84,85	86-90	91-95	96-100
VI.	Asking for help	101-103	104,105	106-110	111-115	116-120

I. <u>Accidentally injuring someone or damaging property</u>.

1. A and B are playing catch. A throws the ball to B. B throws it back and hits A on the arm with it. B apologizes, saying, "I hope it doesn't hurt, I'm sorry I hit you." A says, "That's all right, let's play some more."

2. A and B are playing with B's marbles. A drops some and they roll our of sight. A does not try to find them. B is cross, picks up his marbles, and leaves A.

3. A and B are looking at A's picture. B points at something in the picture and accidentally tears the picture. B gets some tape and tries to repair the picture.

4. A has B's toy car. A drops it and it breaks. A pushes the pieces under a box. B sees a piece of the car and looks under the box. B scolds A for not telling about breaking the car.

5. A has a book and is pointing to a page. B reaches to point and knocks the book out of A's hand. B picks up the book, hands it back, and says, "I'm sorry I knocked it out of your hand, I hope it isn't torn."

6. A lends B a ball to play with. B drops it and loses it. A says, "You lost my ball." B says, "Yes, I'm sorry, I tried to catch it but I couldn't. If I don't find it, I'll buy you a new one." A says, "That's fine - you didn't mean to do it and you said you were sorry and you'll get me a new one. Let's play some more."

7. A says B can borrow A's toy car to play with. B plays with it by himself, then drops it and it is scratched. B leaves the car and runs away. A comes, sees the scratched car, and calls B. A says, "When you got scratches on my car, you should tell me and say you are sorry. You should try and fix the scratches or get me a new car. That was bad to run away. You can't borrow my car again."

8. A borrows B's toy and plays with it. A accidentally drops it and Oh! it breaks. A pushes it over into the corner. When B comes he says, "Hello, A". A says "Hello", but doesn't say anything about toy. Then B sees broken toy. B says, "You broke my toy and didn't tell me and you didn't say you were sorry and you didn't try to fix it. I'm not lending you any more toys."

9. A and B are playing tag. A runs too fast and bumps into B, knocking him to one side. A says, "Oh, I'm sorry, B, I didn't mean to bump into you and knock you. I hope I didn't hurt you." B says, "That's all right. I'm not hurt. You didn't mean to do it and you said you were sorry. Let's play some more."

10. A and B are playing clapping their hands. They clap and clap and have lots of fun. B makes a great big clap and accidently hits A. A says, "Ow, that hurt, watch what you're doing." B says, "I'm sorry, I didn't mean to hit you, I'll be more careful next time." A says, "O.K., you didn't mean to do it and you said you were sorry."

11. Here is A playing with B and having fun running around as fast as they can. A runs so fast she bumps into B, B falls, gets dress dirty. A says, "Oh, I didn't mean to knock you down. I'm sorry, I hope your dress isn't ruined. Will you still play with me?" B says, "I'll still play with you because you didn't mean to knock me down and get my dress dirty and you said you were sorry. Let's play some more."

12. Here is A. Here is B. Look, the[illegible]re playing circus and A is holding a box so B can stand o[illegible] it and be a lion. Oh! look what comes next. A sneezes, lets go of box, B falls down and hurts his leg. B says, "You let go of box and made me hurt my leg." A laughs, says, "You looked funny falling off the box." B says, "That's not nice. You didn't even say you were sorry. When you make someone hurt themselves you say, 'I'm sorry I made you hurt yourself.' I'm going to find someone nice to play with."

13. A and B are having a race. They both start and run as fast as they can. B is running so fast he gets too close to A and trips him. A says, "That was a bad thing to do. I'm going to hit you." B says, "But A, I didn't mean to trip you and I'm sorry you fell down. I'll be more careful." A says, "O.K., you said you were sorry and you didn't mean to do it, so I won't hit you."

14. Mrs. Jones lends B a nice box to play with. He has lots of fun with it. When he jumps over it, look what happens! He kicks it and gets it dirty. B hides the box because he thinks Mrs. Jones will be mad at him for getting it dirty. When Mrs. J comes back she sees the box. She says, "You are a bad boy because you didn't tell me you got the box dirty and you

tried to hide it. If you had told me, said you were sorry and that you didn't do it on purpose, I would not be mad at you."

15. Here is A. Here is B. A is playing with B's doll. She puts the doll down and accidentally steps on it. B says, "You stepped on my doll, that's mean." A says, "I'll step on it some more." B says, "I'm not going to play with you and you can't have my doll any more. You stepped on it and didn't say you were sorry, and then you stepped on it again. I'm going to find someone nice to play with."

16. A asks B if A can borrow crayon to print sign. B says 'Yes' and A starts sign. A presses too hard, breaks crayon. B says, "Oh, you broke my crayon." A says, "I'm sorry I broke it. I'll buy you a new crayon." B says, "That's fine. You said you were sorry and you offered to buy me a new crayon, so you can still use my crayons."

17. B holds piece of wood, A hammers nail into it. Hammer slips, hits B's hand. B says, "You hurt my hand." A says, "Just hold the wood and I'll be finished soon." B stops and says, "You hit my hand and didn't say you were sorry, so I'm not going to hold the wood for you any more."

18. A is reading aloud to B. B jumps up and accidentally knocks the book out of A's hand. A says, "Oh, be careful." B says, "Oh, I'm sorry, I didn't mean to do that." B picks up the book to see if it's damaged. B hands book back to A and says she'll be more careful. A says, "Well, you didn't mean to do it and you said you were sorry, so I don't mind."

19. B and A move furniture around. B, carrying chair, backs into A, steps on A's foot. A says, "Oh, that hurt." B says, "Oh, I'm sorry, A. I didn't mean to bump into you and step on your foot. I hope it doesn't hurt much.. I'm really sorry and I'll try to be more careful." A says, "That's all right B. You hurt my foot but you didn't mean to do it and you said you were sorry. Let's finish the room."

20. A has a new magazine. She gives it to B. B looks at it and, while turning page, drops it. B says, "I didn't mean to drop it, I'm sorry. I hope I didn't tear it. If I did I will buy you a new one." A says, "That's all right. You said you were sorry, and you don't have to buy me a new one."

II. Wanting something that someone else has.

21. A has a ball that he is playing with. B comes and asks A for a turn. A shakes head and says, "No." B goes and gets own ball.

22. A is playing with colored paper. B comes and asks to play. A says, "No." B gets angry, stamps foot. A says, "It's my paper, so I can give you some if I want to, but I don't have to give you any."

23. B has a nice array of toys that he is playing with. A comes and stands a short distance away. B plays happily, but A does not say anything. A looks unhappy, but he does not know that if he wants to play he should ask B if he can play.

24. A has a pot of flowers. B sees them, admires them, and points to one, asking A, "May I have a flower, please?" A says, "Yes, you may have one. You asked nicely and didn't grab." A gives B a flower.

25. B has several balloons. A looks at B with the balloons. A grabs a balloon. B takes the balloon back and scolds A, saying, "If you want something, ask for it, and you may get it or you may not. If you grab, you never get it."

26. A has a new toy. B comes over to look at it. B says, "May I have a turn with your new airplane?" A says, "No, I want to play with it. B says, "I'd really like a turn, but it's your airplane, so you can say whether I can have a turn or not. I'll ask you later." A says, "You asked nicely and you didn't grab, so maybe I'll let you have a turn later."

27. A has just finished crayoning a picture. B wants to see A's picture. B grabs it and it tears a little. A says, "If you want to see something, ask to see it, don't grab it. See, you've torn my picture, I'm not going to show you any more pictures."

28. B has a new toy car. He goes Zoom! Zoom! with it. A wants to have a turn. A says, "May I have a turn with the car?" B says, "You asked nicely and didn't grab, so you can have a turn."

29. A is having fun playing Indian. Look, he has an Indian feather to put on his head. B comes along and points to the

feather, B likes the feather. A skips around going 00-00-00 like an Indian. B stands watching, but doesn't say anything.

30. A is playing Kick-the-ball. He's having lots of fun. B comes along and says, "May I play, too?" A says, "Sure, you can play. You asked first and didn't try to push into the game, so you can play."

31. Here is A. She has a nice new ball. B sees the ball and wants a turn playing with it. B says, "May I have a turn playing with your new ball?" A says, "No, I just got it and I want to play with it myself." B says, "O.K., it's your ball. I'll go and get one of my toys and we can both play."

32. Here is A. He has a new toy box. Here is B. B sees the new box and wants to open it. B says, "May I open your new box, please?" A says, "No, I don't want to let anyone have it, it has some special toys in it." B says, "Well, I'll go and get my toys and we can play some games."

33. Here is B. She has some candy and it's good. A sees the candy and says, "May I have some of your candy, please?" B says, No, I haven't got very much." A says, "You're mean, I want some, give me some, you're mean." B says, "It's my candy and I don't want to give you any. If you are going to act like that, I'm not going to play with you." B goes away and has lots of fun playing with C.

34. A has a new toy car. It's a big one. B comes along and wants a turn with it. B grabs the car. A says, "Give me back my car," and takes it. B says, "But I just wanted a turn." A says, "If you want something, ask for it, don't grab it. I'm not letting you play with it because you grabbed it."

35. B is pretending to dive off the chair and be a swimmer. He jumps off and has lots of fun. A wants a turn. A says to himself, "If I push B out of the way and take a turn, he won't let me play any more, so I'll ask him if I can have a turn." A says, "B, may I have a turn diving?" B says, "Sure, you asked really nicely and didn't just take a turn. You can have lots of turns."

36. A has colored pictures. B wants a picture. She goes over and takes one and goes quickly to the other side of the room. A says, "B, give me back my picture. You can't keep it because you didn't ask for it, you just grabbed it. If you had asked,

I would have given you a picture." B gives the picture back and says she is sorry.

37. B has five new pennies. A comes in and wants a penny very badly. She looks at them and says, "B, may I have one of your pennies, please?" B says, "You asked and didn't grab, so you can have one." B gives A a penny and A says, "Thank you."

38. A has some bright pieces of ribbon in a box. B is sitting beside the Ss. B whispers to one S, "What a nice box of ribbons, I wish I had some." A says, "What were you whispering?" B says, "That I wished I had some ribbons." A says, "If you want something, then ask for it. If you don't ask, nobody knows you want it. Just say,'May I have some ribbons, please?' "

39. A has a picture book and B would like to borrow it. B says, "May I borrow your picture book?" A says, "I'm sorry, you can't borrow it because I have to take it back to the li-. brary." B says, "Maybe I'll get it out of the library sometime."

40. B has some new crayons. A wants them. A says, "May I have those crayons, please?" B says, "No, I want to use them." A says, "That's mean, I asked nicely for them and you won't give them to me. That's mean." B says, "They're my crayons, and if you act like that, nobody will lend you anything, even if you do ask nicely. When they are my crayons, I can say 'No' if I want to."

III. <u>Intentionally injuring someone or damaging property</u>.

41. A and B are playing jump-rope. A wants a long, long turn and she gets mad when B won't let her have a long, long turn. A pulls the rope away and says, "I'm going to hit you with the rope because you made me mad." She hits B with the rope. B says, "I'm not playing with you anymore. You hit me and you didn't say you were sorry, or anything." She goes and plays with C.

42. A has two balloons. B comes and asks for a balloon. A says, "No, I want to play with them myself." B gets mad and hits A. A scolds B and tells B she should say she's sorry. B says, "I'm sorry I hit you, it was a bad thing to do."

43. A and B are each making a boat. A can't make his the way he wants it. He gets mad and kicks B's boat. B says, "You bad boy, I'm not going to play with you. You didn't say you were sorry and you didn t try to fix my boat. I'm going to play with C."

44. A has a dog puppet and she lets B put it on B's hand. Then A says, "I'd like my puppet back, please." B gets mad and throws the puppet on the ground. A picks up the puppet and brushes it off and scolds B.

45. A is trying to reach up high. She get s B's stool, but still cannot reach. She gets mad and kicks over the stool, getting it all dirty. B comes along and A says, "I'm sorry, I got mad and I made your stool all dirty. I'll clean it off." B says, "Well, you said you were sorry and you'll clean it up, so I guess it's all right."

46. A and B are playing with B's new car. B lets A have a long turn with it and then wants it back. B says, "Give me back my car, please." A says, "I want to play with it. I won't give it back." A drops it and tries to break it. B says, "You can't play with any of my toys again. You wouldn't give me back my car and then you tried to break it and you didn't say you were sorry or try and mend it." B goes and plays with C.

47. A and B are playing jump-jump. B gets mad because A can jump higher. B hits A and knocks him down. A says, "That hurt, that's a mean thing to do." B says, "Well, I got mad - you can jump higher." A says, "I'm not playing with you any more. You hit me and didn't even say you were sorry. You can play by yourself. I'm going to find someone else to play with."

48. A and B are having a race to the store. B runs fast and gets there first. A gets mad and hits B. B says, "Ow, that hurt." A says, "I got mad and I hit you. I'm sorry. Just because you won, I got mad. Will you still play with me?" B says, "Yes, because you said you were sorry, but you'd better not do that again."

49. A and B are playing with A's doll. B gets the doll and then she won't give it back. She throws the doll down and gets its dress dirty. A says, "Oh, that was mean, that's my best doll and look at her dress, all dirty." B says, "Oh, I'm

sorry I got mad. I'll take her dress home and wash it for you so it will be all clean again." A says, "That was a mean thing to do, but you said you were sorry and you'll wash it."

50. A and B are playing with A's flag. B has it and is angry because A wants it back. B says, "I'm so mad, I'm going to tear your flag and does tear it. A says, "You ruined my best flag." B says, "I just got mad and I tore it. Now I'm sorry and I ll take it home and sew it together so that it's just like new." A says, "Well, if it ll be just like new that s all right, and you said you were sorry, but you'd better not do that again or I won't play with you."

51. A and B are playing Run and Touch. B chases A and touches him and then A chases B. It's lots of fun. Look: B gets mad and hits A. A says, "Ouch, that hurt a lot, I'm not playing with you." B says, " I got mad and hit you and now I'm sorry. Please play with me and I won't do it again." A says, "You said you were sorry, and you said you wouldn't hit me again, so I'll play some more."

52. A and B are playing with B's new toy. B lets A play with it. A wants a long, long turn. B says, "Give me back my toy please." A won't give it back, instead, he kicks it and tries to break it. B says, "I'm not playing with you any more. You wouldn't give me back my toy and then you tried to break it." B sees another friend and runs over to play with him and they have lots of fun.

53. B has a new doll in a cradle. A comes and sees the doll and wants it. B says, "No, I just got it and I haven't played with it yet." A says, "If I can't have it, you're not going to have it either," and she kicks over the cradle and jumps on the doll. B cries, " I'm not playing with you. You broke my doll and you didn't say sorry and you didn't say you would get me a new one, or anything."

54. Mrs. B lends A a colored picture book to play with. Later, Mrs. B says, "I need the book now, please bring it here." A gets mad and kicks the book on the floor. Mrs. B says, "What a naughty thing to do." A says, "I'm sorry I was so naughty. If I tore any pages I will save up my money and buy you a new book." Mrs. B says, "All right, but don't do that again."

55. A and B are playing Hop-and-Jump. They hop and jump as high as they can. B can hop much higher than A. A gets mad and jumps hard on B's foot. B says, "Ouch, that hurt. That was mean." A says, "You can jump higher than I can." B says, "I'm not playing with you. You jumped on my foot on purpose and didn't even say you were sorry. I'm going to find someone else to play with."

56. A is using B's crayons. A is trying to draw a horse and can't get it to look right. A says, "This silly old horse, I'm so mad I'm going to break the crayon." She breaks it. B says, "You broke my crayon." A says, "Oh, I'm sorry, I got mad and I broke it. I will buy you another crayon." B says, "It was bad of you to break it, but you said you were sorry and you will buy me a new crayon, so that's O.K."

57. A and B are playing with A's checkers. B tries to build a tall tower but cannot. B gets mad, says, "I'm going to throw some of these checkers away," and throws them down on the floor. A says, "Stop that, those are my checkers." B says, "I was mad and I wanted to throw them." A says, "You can't play any more. You threw my checkers away and didn't go and get them and you didn't say you were sorry. I'm not playing with you."

58. B has a new book. She shows it to A. A wants to look at it a long, long time. B says, "Please give me back my book." A says, "I want to look at it some more." B says, "No, please give it to me right now." A throws the book on the floor, says, "Silly old book." B says,"YOU can't have my book again. You threw it on purpose and then you didn't say you were sorry and didn't offer to buy me another one if this one was torn."

59. A and B are having a race to see who can draw the most s squares on a piece of paper. B can do it faster than A. A gets cross and scribbles on B's paper. B says, "Oh, you ruined my paper!" A says, "I'm sorry I got mad and ruined your paper. I'll draw you another one." B says, "All right, you said you were sorry and you said you'd make me another one."

IV. <u>Expressing disapproval of others' behavior</u>.

60. A and B are seeing who can reach the highest. A can reach

higher than B. B says, "You can reach higher than I can. I don't like that." B pushes A so A has to stop reaching. A says, "That's mean, that's not the way to play." B says, I'm sorry I pushed you, I hope it didn't hurt. I won't do that anymore." A says, "O.K., you'd better play properly now."

61. A is playing on the floor with toys around him. B comes over and grabs a toy. A runs and hits B and takes the toy back. B cries and says,"That was mean to hit me." A says, "I didn't like you grabbing my toy." B says, "If you didn't like it, you should <u>say</u> so, you shouldn't just hit me."

62. A is waiting at the Bus Stop. B comes and pushes ahead of A. A looks cross and says, "Stop that, I don't like it. Go to the end of the line and wait your turn."

63. A and B are playing with their cars. A starts crashing his car into B's car. B looks angry, pulls his car away, and leaves. A calls out, "Hey, where are you going?" B says, "I'm not playing any more because I don't like you crashing into my car like that." A says, "If you don't like it, <u>tell</u> me, don't just leave. I thought it was a good way to play, but I'll stop if you don't like it."

64. A is crayoning a picture. B takes a crayon and starts drawing on the picture. A stops B and says, "Stop that, I don't like you drawing on my picture." B says, I'm sorry, I thought you wanted me to put some more things in it."

65. A and B are waiting in line with plates. B pushes ahead. A points behind and tells B to get into line and not push ahead. B says, "I'm sorry," and gets into line properly.

66. A and B are playing hop-hop. It's a rule that A hops and then B (but not both together). B starts hopping when A is having a turn. A says, "B, I don't like it when you break the rule." B says, "Oh, I'm sorry, I forgot. I'll stop right now." They play and have lots of fun.

67. A and B are playing. A pushes B a little and B pushes A so that he falls down. A says, "Why did you push me down?" B says, "You pushed me and I didn't like it." A says, "Well, if you didn't like it you should <u>tell</u> me you didn't like it. You don't hit people when they do something you don't like, you tell them you don't like it."

68. A and B are playing clapping. They each take turns. A keeps clapping when it is B's turn. B stops, points at A and says, "It's my turn, I don't like it when you keep on playing when it's my turn." A says, I'm sorry," and they start playing again.

69. A and B are playing boxing. They box each other and have lots of fun. A gives B a very hard hit. B stops and walks away. A says, "Why are you leaving?" B says, "You hit too hard." A says,"I didn't know I hit too hard. If you don't like the way I hit, you have to tell me. Don't just leave."

70. A and B are talking about their toys. When A talks, he pokes B for emphasis. A says, "I got a new car (poke), a train (poke)," etc. B says, "I don't like you poking me. Please stop or you'll have to find someone else to play with." A says, "I'm sorry, I didn't know I was poking you like that. I'm glad you told me instead of just going to play with someone else."

71 A and B are playing jump-over-the-box. A has a turn and then B. Look what A is doing, he's taking more turns. B doesn't like it. B says, "A, it isn't fair to have more turns, I don't like playing like that." A says, "O.K., I'll stop and you can have some more turns to make up for the ones I took."

72. A and B are playing Indians. They are trying to walk as quietly as they can. They tiptoe around like Indians in a forest. Suddenly, B starts shouting. A turns and hits B, hard. B says, "Why did you hit me?" A says, "I didn't like you shouting." B says, "If you don't like something, you tell me, you don't hit first. I'm not playing Indians with you anymore."

73. A and B are playing with B's tea set. A hears her Mommy calling her and runs, knocking the teaset over. A comes back in a few minutes. B says, "I don't like you knocking over the teaset. If you aren't more careful, I won't play with you any more." A says, "I'm sorry."

74. A has some bright colored paper. B sees it and takes a piece, without asking. A says, "I'm going home." B says, "Don't you want to play anymore?" A says, "No, you just took my paper." B says, "Well, I didn't know you wanted it. If you didn't like me taking a piece, you should say so, you shouldn't just leave."

75. A and B are playing army games. They are creeping up on the enemy. Suddenly, A jumps on B. B hits A. A says, "Why did you hit me?" B says, "I don't like you jumping on me." A says, "I was just pretending the enemy saw us. If you don't like something, tell me, don't hit first."

76. A is telling B a story. B keeps interrupting. A frowns, looks cross, but B keeps on interrupting. A says, "I don't like it when you keep talking when I'm talking. Please wait until I'm finished and then you can have a turn." B says, "I'm sorry, I'll try to remember."

77. A and B are looking at B's magazine. A keeps grabbing it and pulling it over to her side, saying things like, "Oh, look at this nice picture!" B looks unhappy and cross but says nothing. If B does not like A pulling at the magazine, B should say, "Stop that, I don't like it."

78. A and B are playing a drawing game. A draws on the paper, then B, etc. B draws three times in one turn. A says, "I have to go now." B says, "Don't you want to draw any more?" A says, "No, you took three turns instead of one." B says, "If you didn't like that you should <u>say</u> so, you shouldn't just leave. You can have some turns to make up."

79. A has a box of toys. B grabs one and starts playing with it. A says, "I don't like you taking a toy, you should ask first. Give it back, please." B gives the toy back and says, "I'm sorry, next time I'll ask first."

80. A is getting a book from the shelf. B comes over and reaches in front of A and takes a book. A pushes B. B says, "Don't push." A says, "You pushed me to get a book." B says, "If you didn't like it you should <u>say</u> so, you shouldn't push me."

V. <u>Responding to disapproval from others</u>.

81. B has his toys on the floor. A comes to play with them and tries to take a toy apart. B scolds A. A hits B. B gathers up his toys and say, "When someone gets after you for doing something bad, you shouldn't hit them, you should say you are sorry and won't do it again. I'm going to play with someone else."

82. A and B are waiting in line to go to recess. A pushes ahead

of B. B says "Stop that pushing, I don't like it." A says, "I'm sorry, I won't do it any more," and gets into line properly.

83. A and B are playing prisoner. A is prisoner and has his hands up. B is behind him, with his gun. A says, "Stop poking me with the gun, it hurts." B says, "I'm sorry, I won't do it again."

84. A is waiting to go to the store with B. B is late. B comes and A scolds B, pointing to her watch. B says, "I'm sorry I'm late, I had a lot of trouble starting the car." When someone gets after you, you should say you are sorry and explain what happened.

85. A has a plate with several apples on it. B points to plate and says, "A, those are my apples. Please put them back." A says, "I'm sorry, I didn't know they were yours." A puts the plate back where she got it.

86. B is going to the store to get some things for his mother. When he gets home, his mother scolds him because he did not get everything. B says, "I'm sorry I didn't get everything, but the store did not have all the things you wanted." His mother says, "I'm glad you told me why you didn't get everything."

87. A has borrowed B's picture and crumples it a little while looking at it. A gives back the picture and B scolds him. A says, "It's a silly old picture anyway." B says, "I'm not showing you any more pictures. You were bad and when I got after you you didn't even say you were sorry you ruined my picture. I'm not playing with you any more."

88. A is making funny noises and having lots of fun. B says, "Please stop making all those noises, I'm trying to do my work." A says, "I'm sorry it bothers you, I'll stop and play a quiet game." B says, "Thank you, that's being very good."

89. A is playing Pretend. First he pretends he is an Indian. B comes along and A pretends B is a wild animal and jumps on him. B says, "Stop that, don't jump on me. I wasn't doing anything to you." A says, "I'm sorry, I was pretending you were a wild animal." B says, You said you were sorry, so let's play."

90. A is playing Push-Push. He pushes against the wall, he pushes against the floor. B comes in and A pushes him, hard. B says, "I don't like you pushing me. Stop. It hurts." A says, "You are just an old cry-baby." B says, "When someone doesn't like what you do, you are supposed to stop and say you are sorry. I'm going to find someone else to play with. You can play by yourself."

91. A comes home late and his mother is cross. She says, "You are a naughty boy to be late." A says, "I know I was late and I'm sorry, but I was helping B get his dog out of the mud." His mother says, "Well, that's all right then. You said you were sorry and you told me why you were late, so that's being a good boy."

92. A is looking for a book his mother wants him to find. B is supposed to help him, but B goes out to play. When B comes back in, A gets after him. B hits A and runs away a little. A says, "I got after you because you didn't help me. You should say you are sorry, you shouldn't start hitting me. I have a new game but I'm not going to ask you to play."

93. A and B are playing with A's car. B gets mad and throws the car on the floor. A says, "I don't like you throwing my car on the floor." B says, "I'm sorry I threw it, I won't do it any more."

94. A comes out to play and here comes B, too. A says, "Let's start here and we'll have a race to the swings in the park." B pushes ahead of A at the starting line. A says, "I don't like you pushing ahead." B hits A. A says, "I'm not playing with you, anymore. If someone doesn't like something you've done, don't hit them, tell them you are sorry and you will try not to do it again."

95. B is playing and having lots of fun. She forgets to go home on time and is very late. B's mother says, "You are a naughty girl to be so late." B says, "I know I'm late and I'm sorry. I was playing and I forgot all about the time. I'll try not to be late again."

96. A is making a noise, stamping his feet and clapping. B says, "You are too noisy, you should be able to be quiet for a little while." A says, "I'm sorry, I was making some noise. I'll go outside where I won't disturb you."

97. A is making some signs. A says, "I wonder where B is, she was supposed to help make these signs." A finishes the signs. B comes and A scolds B. B says, "Well, you're all finished anyway." A says, "When you're late you're supposed to say you are sorry. I have some new toys but I'm not going to let you have a turn."

98. A sees a box and goes and starts poking in it. B sees her and says, "A, that's not your box. Please stop looking in it." A says, "I'm sorry, I'll stop looking in it." B says, "You said 'Sorry' so nicely, I'll let you look in the box later."

99. A is talking about going shopping. B continually interrupts A. A says, "It's rude to interrupt, I don't like it when you do that. Wait until I'm finished." B says, "That's mean." A says, "If someone doesn't like what you are doing, don't say 'That's mean', say 'I'm sorry.' "

100. B has some colored pencils. A comes and grabs some. B says, "Don't take my pencils, I don't like it when you just take them without asking." A starts to leave the room. B says, "When someone doesn't like what you're doing, don't just leave, say you are sorry and you'll try not to do it again."

VI. <u>Asking for help</u>.

101. A is standing on tip-toes trying to reach something. A rubs eyes, walks off. If you can't do something by yourself, you should ask someone to help you.

102. A is playing a game. B comes along to play, too. B says, "I don't know how to play this game, will you show me how to play?" A shows B how to play and they have lots of fun.

103. A is trying to lift a big table. A tries and tries. B comes along but A does not say anything. B says, "Well, I guess I'll go and play," and he goes off. If you can't do something by yourself, you should ask someone to help you.

104. A is trying to pull a chair. A pushes, pulls, and can't move it. A gets mad and kicks the chair.

105. B is trying to get a button on her sweater undone. B says,

"A, will you please help me get this button undone?" A helps B and gets the button undone.

106. A is trying to take her ribbon off. She tries and tries but can't get it off. B comes along. A says, "Will you help me get my ribbon off, please?" B says, "Yes, I'll help you. Then let's go and play."

107. A is very thirsty. He goes around and around looking for a drinking fountain, but he can't find a drinking fountain anywhere. B comes along, but A just keeps looking by himself.

108. B is reaching as high as he can to take a paper off the wall. He stretches and stands as tall as he can but he can't reach it. A comes and B says, "Could you help me get this paper down, please?" A helps B.

109. A is at the store buying sugar for his mother. He looks and looks, but he cannot find where the sugar is. A goes home to tell his mother. His mother says, "A, if you can't find something by yourself, you should ask someone to help you. You go back to the store and say to the man, 'Could you help me find the sugar, please?' "

110. A is playing a game. B comes and wants to play, too, but he doesn't know how. B stands and watches, but he doesn't say anything. A says, "Don't you want to play?" B says, "Yes, but I don't know how." A says, "If you don't know how to do something, you should ask someone to help you. I'll show you how to play."

111. B has a toy that does not work. B tries and tries to make it work, but can't get it to start. A comes along. B says, "I can't get this toy to work, could you help me, please?" A says, "Yes, I'll help you, let's see what's wrong."

112. A has a new jump rope. She needs someone to show her how to jump rope. She wants to learn very badly but she doesn't know how to start. B comes along, but A does not ask her for help.

113. A wants to build a tree house. His dad will give him some wood. A says, "I can't build this tree house all by myself, so I'll ask B to help me." B comes and A says, "Will you help me build the tree house?" B says, "Yes, let's start

right now."

114. Here is A and here is A's mother. A wants to go over to B's house to play but B has just moved and A does not know the way. A says, "I guess I'll play around here by myself." If you don't know how to do something, ask someone to help you. A should ask his mother how to get to B's house.

115. A is playing with her doll in a cradle. A says, "I want to make a new dress for this doll, but I don't know how." Here comes B. A says, "Could you help me make a dress for my doll?" B says, "No, because I don't know how either. Let's go and ask my mother to help us make a dress."

116. A has a pile of paper to be folded and says, "Oh, dear, I can't get these done in time, there are too many." B comes over and A says, "Would you help me fold these papers, please? I can't do them fast enough by myself." B says, "I'll help you and we'll get them done in time."

117. A is reading a book to herself and B is trying to make a paper hat. She tries and tries, but can't do it. B says, "Oh, this silly old paper," and crumples it up, throwing it on the floor. If B can't make the hat, she should ask A to help her.

118. A is reading a story book out loud. She comes to some words she doesn't know. A says, "This is a good story, but I don't know some of the words." A tries again, then slams the book shut and throws it on the floor. B says, "If you don't know something, you should ask someone to help you."

119. A is tidying the room and moving some of the furniture. A tries to move the table, but can't move it. B is there. A says, "Would you help me move this table, please?" B says, "Yes, I'll help you. It's too heavy for one person to move it."

120. B is cutting some paper stars. She does not like the way they look. A comes over. B says, "I want some paper stars, but I don't know how to make them. Do you know how? Could you help me, please?" A says, "Yes, I'll help you."

Appendix B

Training Program for the Control Group

1. A throws the ball to B. B catches it and says, "Let's play some other games." What are some games you play with a ball?

2. A has marbles and is playing with B. A says, "These are so nice and round and such nice colors." What are some small round things that are good to eat?

3. A has a book. B says, "What kind of book is that?" A says, "A story book." What are some other kinds of books?

4. A and B are playing hide the car. A hides it under the box but B finds it. A says, "Where could you hide the car in the room you are in now?"

5. Look, B has a new storybook. She's showing A a picture and telling her a scary story. A says, "Let's make up a story ourselves. Once upon a time there was an old house in the forest. Now you say what happens next and everybody can have a turn."

6. A lends B a ball to play with. B says, "I wonder how high we can throw the ball." A says, "As high as the roof, as high as the trees." B says, "Could we throw it as high as an airplane?" What things go up high?

7. A says, "B, you can borrow my toy car to play with." B says, "I'm going to pretend I'm in a car race. Zoom! Zoom!" A says, "Let's all pretend we're in a car race." What are some things that car racers do?

8. A borrows B's toy and plays with it. When B comes, he says, "Let's make some more toys, I have a big cardboard box we can use." What kinds of <u>toys</u> could you make with a big cardboard box? What <u>games</u> could you play with it?

9. A and B are playing tag. Then they pretend to be bunnies playing tag. Instead of running, they hop and jump to try to catch one another. How would dogs play tag? How would birds play tag?

10. A and B are playing clapping their hands. They clap and clap and have lots of fun. Then they try to clap a lot of different ways. They clap <u>very</u> softly. What other ways could they clap?

11. Here is A playing with B and having fun running around as fast as they can. They run and run and then they pretend they

are animals that jump. What animals are good jumpers?

12. Here is A. Here is B. Look, they are playing circus and A is holding a box so B can stand on it and be a lion. Oh! look what comes next. B gives a loud roar and jumps off the box and says, "You be an animal in the circus and chase me." What animals are in a circus?

13. A and B are having a race. They both start and run as fast as they can. A says, "Let's be cars racing." B says, "Oh, that's fun" and they go, Vroom! Vroom! What other things could A and B pretend to be racing?

14. Mrs. B lends B a nice box to play with. He has lots of fun with it. First, he pretends it's a stage-coach and Indians are attacking and he has to shoot. Then he says, "What else could I play with this box?"

15. Here is A and here is B. A is playing with B's doll. B says, "Let's play that the house is on fire and we have to save the doll." A says, "You be the fire chief and I'll be the fire engine. Clang! Clang!" What would the firemen do when they see the fire?

16. A asks B if she can borrow a crayon to print a sign. The sign says, Jungle. B says, "Let's draw some things around the printing so it looks nicer. Let's draw a tiger." What other animals could they draw?

17. A holds a piece of wood, B hammers nails into it. A says, "What are you making?" B says, "A boat, see, the nails are the masts." A says, "If you had some string you could make a place for flags. It doesn't look very much like a boat so far." How can we make it look more like a boat?

18. A is reading aloud to B. It's a story about airplanes. B says, "I've never been in an airplane, I wonder what it's like." A says, "If you go on a long trip, you have dinner on the airplane." What can you tell about airplanes?

19. A and B move furniture around. A says, "How many legs has a chair got, B?" B counts out loud and says, "Four." A says, "I have two legs." How many legs does that chair have? The table? The children?

20. A has a new magazine. B says, "Look at the red car. It can

go fast." What else in the magazine can go fast?

21. A is bouncing a ball. B says, "Let's say names of things to eat when we bounce the ball. Let's go like this - bounce - bread, bounce - butter, bounce - popsicle." What other things to eat could they say when they bounce the ball?

22. A is crayoning patterns. B says, "What kinds of patterns can we make?" What kinds of patterns do you see in the room? What kinds of patterns could B make?

23. A has some toy cars. A says, "Let's make a little town. What could we have in it?" B says, "A gas-station, a store." What else could they have in a little town?

24. Look at the pretty flowers. A sees them and wants one. She says, "How did you grow the flowers?" How could you grow some flowers? What would you need?

25. A has two balloons. She gives one to B. B says, "These are pretty colors. What other colors could we get?"

26. A has a new airplane. B comes over to look at it. A says, "Let's play some games with my new airplane. You be a prisoner and I'll come with my airplane and save you." B says, "That sounds like fun." What other games can you play with an airplane?

27. A has just finished crayoning a picture. A says, "Look at my picture. It has four corners - one, two, three, four." B says, "What else do you see that has four corners?" A says, "The window has four corners." What else in the room has four corners?

28. A has a new red toy car. He goes Zoom! with it. B says, "That car is a nice red color." A says, "Do you see anything else in the room that is this nice red color?" What else is a nice red color?

29. A is having fun playing Indian. Look, he has an Indian feather to put on his head. B comes along, pretending to be a wild animal - grrr! grrr! What might an Indian do when he saw a wild animal? What else might an Indian see in the forest?

30. A is clapping his hands and skipping around, playing a game he made up. B comes along and asks if he can play, too. They

clap and skip and have lots of fun. Can you make different sounds when you clap? Can you make a galloping horse sound by clapping on your knees?

31. Here is A. She has a nice new ball. Here is B and she plays with the ball, too. A kicks it to B and B kicks it back. A says, "This ball is round. Let's roll it on the ground." What are some other round things?

32. Here is A. He has a new toy box. Here is B. B says, "Let's play some games with that nice box." A and B play jumping over the box. Then B says, "Let's make the box into a fort." How could they make the box into a fort?

33. Here is B. She has just finished some candy. Here comes A. She says, "I wish I'd had some candy." What are some ways A and B could get some more candy?

34. A has a new toy car. B comes along to play. First they play that A is driving and the policeman stops him and tells him when to go. Then B says, "Now I'll be the driver and you be the policeman and I'll go too fast and you make me stop." What else does a policeman do?

35. B is pretending to dive off the chair and be a swimmer. He jumps off and has lots of fun. Here comes A. A says, "Let's pretend we're fishing and the chair is an island." What are some things A and B will need to fish?

36. A has some colored paper. B comes over and says, "What could we make with that colored paper?" A says, "An airplane," and makes one while B watches. How could they decorate the airplane with crayons? What else could they make by folding the paper?

37. A has some money - five pennies. She says, "I have five pennies - one, two," etc., and points as she counts. B says, "Five is a lot," Do you know any other things that there are five of? Count them and see.

38. A has some bright pieces of ribbon in a box. B says, "What nice colors." Do you know the colors in the box? Pick them out and name them.

39. A has a picture book. B looks at it, too, and picks out one picture. She starts a story about the picture (1 or 2 sen-

tences) then says to A, "You finish the story." A adds one or two sentences and then points to another picture. What story could you tell about this picture?

40. A has some new crayons. She says to B, "Let's tell a story with the crayons." B says, "That's a nice idea, I'll start and draw a big tree." A says, "Here's a little house near the tree." What else could they put in their picture?

41. A has a skipping rope but does not know how to skip. B says, "Let's play some other games with the skipping rope." What other games could you play with a skipping rope?

42. A has some balloons. B says, "What pretty balloons." What is inside a balloon? What is a balloon made of? Is a balloon strong? What can break a balloon?

43. A has a picture he's crayoning. A makes a red circle, an orange circle, and a green circle. Where do you see these colors? What do they tell you to do?

44. A is lending B a puppet. Look, it is a boy puppet. B tries on the puppet and says, "This puppet's name is Charlie. Let's tell a story about him. One day Charlie went for a ride on a horse. Now you tell the next part of the story."

45. A is trying to reach up high into the tree. She is going to put some things up in the tree for the birds. What things could she put in the tree for the birds?

46. A and B are playing with A's new car. A pretends he is a race car driver and zooms around (holding the car). B says, "Make the car crash and we'll pretend it's an accident." Who would come and <u>help</u> in a real accident?

47. A and B are playing Jump-Jump. They jump around and have lots of fun. What animals that jump could A and B pretend to be?

48. A and B are having a race to the store. A says, "I'm going to pretend I'm a fast racehorse." B says, "I'm going to be an airplane" and he spreads his arms. What other things go fast?

49. A and B are playing with B's doll. B says, "Let's pretend the doll is going to the beach." What are some things to do at the beach? What are some things to take to the beach?

50. A and B are playing with A's flag. They pretend to be in a parade and go "March, march, left, right." What are some things in a parade?

51. A and B are playing "Run and Touch". B chases A and touches him, A chases B. B says, "I'm going to be a fast train and go over the ground." A says, "I'm going to be a boat and go on the water." What goes in the air? What goes under the water?

52. A and B are playing with B's new car. A says, "I like cars that are this color." Do you see any other things around the room the same color as the car?

53. B has a new doll in a cradle. A comes to play. A says, "What a nice cradle for your doll." B says, "We're all going camping and I can bring my doll but not the cradle." What do people sleep on when they go camping? Where do they sleep?

54. Mrs. B lends A a colored picture book to look at. A finds a picture of a birthday party. What are some things that you have at a birthday party?

55. A and B are playing Hop-and-Jump. They hop and jump as high as they can. If they hopped so high that they went way up in the sky, what might they see up there?

56. A is using B's crayons. A says to B, "Let's draw some different colored circles on the paper." A and B draw circles. A says, " What can we make the circles into?" B says, "I'll make a balloon" and draws a string onto one circle. What else could you make the circles into?

57. A and B are playing with checkers. They are building towers with them. A says, "This is lots of fun. What else can we make?" B says, "A necklace" and arranges the checkers into a circle. What else could they make?

58. A has a new book. She shows it to B. A says, "This book is about a kitten. It is a black kitten." B says, "What is the kitten's name?" A says, "You guess what the kitten's name is." What do you think the black kitten's name is?

59. A and B are having a race to see who can draw the most squares on a piece of paper. B says, "What can we make these squares into?" A says, "A house is square on the bottom part" and adds a roof to one square. What else could they make the squares into?

60. A and B are seeing who can reach the highest. They stretch and stretch. If they wanted to touch the ceiling, how could they do it?

61. A has a group of cars. B says, "Let's play traffic and I'll cross the street." What do you do when you cross the street?

62. A is waiting at the bus door to buy a ticket. B says, "What are you buying a ticket for?" What are some other things that you buy tickets for?

63. A and B are playing with cars. A says, "Let's drive to the flower store and get some flowers." What kinds of flowers can you think of?

64. Look at A's picture. B is helping her to finish it. B says, "Let's make a big picture about our school. What could we put in the picture?"

65. A and B are waiting in line for a picnic lunch. A says, "I'm hungry. I hope we have lots to eat." B says, "What are some things you like to eat at picnics?"

66. A and B are playing hop-hop. First A hops and then B hops. A says, "Can you hop on your right foot?" Which is right and which is left? Hands? Feet? Side of table? etc.

67. A and B are playing. A pushes B a little and B pushes A. A says, "You push and I'll pull." Show how you push. Show how you pull. What things do you push? What things do you pull?

68. A and B are playing clapping. They each take turns. A says, "It would be more fun if we clapped for something." What are some things that people clap for? When do you clap in school?

69. A and B are playing boxing. They box each other and have lots of fun. A says, "Let's pretend you're a wild animal and I'm trying to scare you away." What are some wild animals that A might try and scare away?

70. A and B are talking about their toys. A says he got a lot of nice toys for his birthday. B says, "How many toys did you get that have wheels on them?" What toys can you think of that have wheels on them?

71. A and B are playing Jump-over-the-Box. B says, "What else could we jump over?" What are some things that you could jump over in this room? Outside?

72. A and B are playing Indians. First they pretend to go hunting and they tiptoe through the forest. A says, "What else do Indians do?" What do Indians hunt with? Where might they sleep? What does the Indian Chief wear?

73. A and B are playing with B's tea set. What are some of the things to eat when you have a tea-party?

74. A has some bright colored paper. B says, "What are you going to make?" A says, "A kite." What else will A need to make a kite?

75. A and B are playing soldier. First they march up and down. Then A says, "I wish we had a tank." B says, "Or some helmets." What else would it be fun to have if you were playing soldier?

76. A is telling B a story. A says, "It's more fun if everyone tells one thing in the story. Bobby and Tommy were going to the park...etc." OR, "Once upon a time there was a dog named Blackie...etc."

77. A and B are looking at A's magazine. A says, "Let's look for cars" and finds a car picture. What kinds of different cars are there? (police car, jeep, truck, bus, etc., not makes of car).

78. A and B are playing a drawing game. A draws a box and B has to draw something inside the box. A draws some circles. What could you put inside a circle? (food on plate, candles on cake, face, etc.).

79. A has a box of toys. B says, "How many toys can you think of that begin with B?" What are some toys that begin with the letter B?

80. A is getting a book from the shelf. B says, "Instead of reading, let's play catch with this ball." What other games do you play with a ball?

81. A has some toys and B says, "Have you any toys that go in the water?" What are some toys that go in the water?

82. A and B are in line at the movie. B says, "What do you have to buy to go to the movie?" Who shows you where to sit? What are your favorite movies?

83. A and B are playing guns. A says, "What games can we play with these guns?" What games can you play with toy guns?

84. A is waiting to go to the store. B comes and A says, "Let's hurry so we have lots of time to look in the toy store." How could A and B get there fast?

85. A has some fruit on the plate. B points to the plate and says, "Have you any cherries?" A says, "No, but I'll go and see what other kinds of fruit there are in the house." What other kinds of fruit can you think of?

86. A is looking for B. A calls and calls but B doesn't come. A says, "I think B is hiding on purpose. I'm going to look all over the house and try to find him." Where are some of the places B might be hiding?

87. A has borrowed B's picture and crumples it a little. B says, "I didn't really want to keep the picture, let's play catch with it." B crumples it into a ball. What other games could they play with it?

88. A is making funny noises. He goes, "Oink, oink." A says, "Can you guess what animal makes that sound?" B says, "That's easy, a pig goes Oink." What are some other animal sounds that A could make?

89. A is playing pretend. She pretends she's an Indian going OO-OO-OO with her hand over her mouth. She says to B, "What sounds can you make, can you make a siren sound?" What are some other sounds A and B could make?

90. A is playing Push-Push. She pushes against the table, she pushes against the wall. B says, "What are you playing?" A says, "I was playing Push, but let's play Follow-the-Leader and you follow me and do everything I do." What are some things that the Leader could do?

91. A comes home late and his mother is cross. She says, "You are a naughty boy to be late. You must do some work to make up for being late." What are some things that A might have to do?

92. A is looking for a book his mother has lost. It is a book about ponies. B says, "What do the ponies do in the story?" A says, "They let children ride on them." Where do ponies sleep? Are they bigger than horses? What do ponies eat? Have you ever ridden on a pony?

93. A and B are playing with A's car. B says, "Let's go and get all our toys that move, like cars." What are some toys that move, like cars?

94. A comes out to play and here comes B, too. A says, "Let's start here and we'll have a race to the swings in the park." B says, "Let's play on all the things in the park." What are some of the other things in the park?

95. B is playing and having lots of fun. She forgets to go home on time and is very late. B's mother says, "You are a naughty girl to be so late. I needed you to help me get dinner." What are some ways that B can help get dinner?

96. A is making a noise, stamping his feet and clapping. B says, "What are you doing?" A says, "I'm pretending I'm cold and I'm trying to get warm." What is on the ground when it is very, very cold? What do they wear?

97. A is printing a sign. It says, "Bus Stop". B says, "Some children have never been on a bus." What do you know about riding on a bus?

98. A sees a box and goes and looks in it. B says, "What's in the box?" A says, "I'm saving some pictures of birds." B says, "I know the names of some birds." What names do you know?

99. A is telling about going shopping. A says, "I wanted some nails and I went to the hardware store." B says, "Where would you go if you wanted a toy car?" Where would you buy a cake? What other kinds of store can you think of?

100. A has some colored paper. It is red. B says, "What nice red paper. What are you going to do with it?" A says, "I'm not sure, there are so many things to choose that are red." What are some red things?

101. A and B are standing on tip-toes to reach something. A says, "If we were bigger, we could reach up high." What animals can reach up high?

102. A is playing with some boats. B says, "Let's get some other kinds of boats." What are some other kinds of boats?

103. A is trying to lift a big box of toys. It is too heavy for him to lift. How can he move it into the house? (empty it, tip it over and over, push it).

104. A is trying to pull the chair but it is stuck. She pushes it but she can't move it. She says, "We'll have to find some other things to sit on because this chair is stuck. What else could we sit on?"

105. A is trying to get her button undone. B helps her and they get it undone. A says, "What are some other ways that clothes could be fastened?"

106. B is trying to take her ribbon off. She tries and tries but can't get it off. What are some other things that are hard to get off?

107. A is very thirsty. B comes along and A asks him if he would like a drink of water. What other things are there to drink?

108. A is reaching as high as he can to take a paper off the wall. B watches and says, "Why don't you stand on a box?" What else could A stand on to help get the paper down?

109. A is at the store buying sugar for his mother. A's mother is letting A buy anything he wants for dinner. What do you like most for dinner?

110. A is playing a game. He touches his toes, claps, swings from side to side. B comes and watches and says, "Can I play? What are you playing?" A says, "I'll do something and you guess what it is." He marches along, pretending to hit a drum. What do you think A is pretending to be? What else could he pretend to be?

111. B has a toy that does not work. First she pushed it, then she shakes it and still it does not work. What toys do you have at home that don't work? What made them not work?

112. A has a new skipping rope. She doesn't know how to skip so she pretends the rope is a snake and makes it wiggle on the ground. B says, "Let's pretend I'm prisoner and you tie me up." What else could they play with the rope?

113. A wants to build a tree-house. His dad will give him some wood. A says, "B, let's sit down and plan this tree-house." B says, "We'll need a ladder to get up the tree." What else might they need in a tree-house?

114. Here is B. Here is B's mother. B wants to go and play with A but first he has to do some things in the house. He goes to the store for his mother. What are some other things that B could do to help his mother?

115. A is playing with her doll in the cradle. It is a new doll and A says, "What would be a good name for the doll, B?" What are some names that A could call her doll?

116. A has a pile of paper to be folded. B says, "Let's play with the paper." A says, "What shall we play?" B says, "Let's play tents." Hou could you fold the paper to make a tent?

117. A is reading. B is trying to make a paper hat. B says, "What else could you make with that paper?" What else could you make?

118. A is reading a story book. She says, "I think I'll make up a story about this picture." A says two sentences about the picture. Could you tell another story about the picture?

119. A is tidying the room. She tries to move the table, but cannot. A says, "If I can't move this table, we'll have to use something else for a table." What else could you use for a table?

120. B is cutting some paper stars. A says, "Let's cut some other things for the sky." B says, "What shall we cut?" What else goes in the sky?

Appendix C

Logical Thinking Tests

Social Behavior Tests

PICTURE STORY SET I

Name_____ Score_____
Date_____ Administered by_____

1. Look at the pretty balloons on the table. Bobby (red sweater) wants a red balloon. If Bobby hits John, Bobby can't have a red balloon. Bobby hits John. What comes next?

_____

_____

2. Here is Betty (on left). Betty and Mary are dressed in their Mommies' clothes. Betty wants Mary's hat. If Betty says, "Please," she can have Mary's hat.
She does not say "Please." What comes next?

_____

_____

3. Here is Betty - jumping rope.. Here is Mary..
If Betty plays nicely, her Mommy will let Mary stay to lunch.
Betty plays nicely. What comes next?

_____

_____

4. Here is Bobby and see the cookie jar. Bobby wants a cookie.
If Bobby eats his dinner, he can have a cookie.
He does not eat his dinner. What comes next?

_____

_____

5. Here is Bobby and his big brother Tom. Tom dropped a box.
If Bobby picks up the box, Tom will give him a candy bar.
Bobby picks up the box. What comes next?

_____

_____

6. Here is Mr. Jones. Here is Bobby buying some things.
If Bobby says, "Thank-you," Mr. Jones will give him free bubblegum.
Bobby does not say, "Thank-you." What comes next?

_____

_____

PICTURE STORY SET II

Name_____ Date_____

Date_____ Administered by_____

1. Look at the pretty balloons on the table.
   Bonnie wants a red balloon.
   If Bonnie makes a noise, she cannot have a red balloon.
   Bonnie makes a noise. What comes next?

   _____

   _____

2. Here is Beth (on left). Beth and Sally are dressed in their Mommies' clothes.
   Beth wants Sally's coat.
   If Beth asks for the coat, she can have it.
   Beth does not ask for it. What comes next?

   _____

   _____

3. Here is Betsy, jumping rope. Here is Susan.
   If Betsy comes when she is called, her Mommy will let Susan stay to lunch.
   Betsy comes when she is called. What comes next?

   _____

   _____

4. Here is Brian and, see the cookie jar. Brian wants a cookie.
   If Brian washes his hands, he can have a cookie.
   Brian does not wash his hands.
   What comes next?

   _____

   _____

5. Here is Bill and his big brother, John.
   If Bill helps carry the boxes, he can play with John's football.
   Bill helps carry the boxes.
   What comes next?

   _____

   _____

6. Here is Mr. Jones. Here is Barry buying some things.
   If Barry says, "Please," Mr. Jones will give him a candy.
   Barry does not say, "Please."
   What comes next?

   _____

   _____

DOLL PLAY SET I

Name_____ Score_____
Date_____ Administered by_____

1. Here is Billy. He is playing jump-jump. He is jumping high - look - jump-jump, jump-jump - and having fun. Here comes Jimmy. He runs over and hits Billy. What comes next?

2. Here is Barbara. She is playing with her friend, Joan. They both are having lots of fun. Barbara's mother calls her to come home, but Barbara doesn't go. Her mother calls and calls but Barbara doesn't go. What comes next?

3. Bobby has some nice yellow paper. He is going to make a kite to fly. Here comes Johnny. He wants Bobby's paper. Johnny takes it and runs away. What comes next?

4. Barbara is playing hoppity-hop. Look how far she can hop. She's hopping so fast she doesn't see the big bottle and she knocks it over and it breaks. What comes next?

5. Benny is playing with his Daddy's car. He is cleaning it. Here comes Jack. He kicks the car and makes it dirty. What comes next?

6. Barbie is running to the store to get some hot-dogs for supper. She runs so fast she doesn't see Joanie and she bumps into Joanie and Joanie falls down. What comes next?

DOLL PLAY SET II

Name_____ Score_____

Date_____ Administered by_____

1. Here is Barry. He is playing kick-the-ball. He is having lots of fun going kick-kick. Here comes Tommy. Tommy runs over and hits Barry. What comes next?

2. Here is Betsy. She is playing with her friend, Sharon. Betsy's mother calls her to go to the store, but Betsy doesn't go. Her mother calls and calls but Betsy doesn't go. What comes next?

3. Billy has some nice red paper. He is going to make a big flag. Here comes Don. He wants Billy's paper. Don takes it and runs away. What comes next?

4. Bonnie is playing run-around-in-circles. Look how fast she can run. She runs around so fast she doesn't see the chair and she knocks it over and it breaks. What comes next?

5. Bobby is playing with his Daddy's boat. He is cleaning it. See how nice it looks. Here comes Johnny. He kicks the boat and makes it dirty. What comes next?

6. Betty is running to school because she is late. She runs so fast she doesn't see Jeanie and she bumps into Jeanie and knocks Jeanie down. What comes next?

PUPPETS SET I

Name_____ Score_____
Date_____ Administered by_____

1. Listen to Tiger. He goes, "Chomp-chomp," all day. Big Bear says, "Tiger, if you keep making that noise you will have very short legs when you grow up." Tiger does keep making that noise, "Chomp, chomp." What comes next?

_____.

_____

2. Look at Little Goat. He is going clappity-clap. Here comes Tiger. If Little Goat goes clappity-clap, Tiger will give him a penny. Little Goat does not go clappity-clap. What comes next?

_____

_____

3. Big Bear likes eating. He likes yum-yum best. Tiger tells him that the store has yum-yum. He says, "If you go to the store you can get some yum-yum." Big Bear does go to the store. What comes next?

_____

_____

4. Big Bear and Tiger are playing a funny game. If Big Bear runs hoppy-hop, Tiger will be very tall. Big Bear does run hoppy-hop. What comes next?

_____

_____

5. Little Goat has lost his bell. It goes jingle, jingle and he can't find it. His Mommy tells him to ask Big Bear. She says, "If you ask Big Bear you will find it." Little Goat does not ask Big Bear where his bell is. What comes next?

_____

_____

6. Look at Little Goat. If he stands big and tall, Big Bear will touch his toes like this. Little Goat does stand big and tall. What comes next?

_____

_____

PUPPETS SET II

Name_____ Score_____
Date_____ Administered by_____

1. Tiger wants someone to play hopsy-topsy. Big Bear says, "Tiger, if you jump up and down--3 big jumps like this--I will play hopsy-topsy with you." Tiger does jump up and down--3 big jumps--like this. What comes next?

_____

_____

2. Look at Tiger, he says, "Boop-boop, boop-boop." If Tiger says boop-boop a lot, Little Goat says he will stand on his head like this. Tiger does <u>not</u> say, "Boop-boop." What comes next?

_____

_____

3. Little Goat wants to be good at climbing trees, like Tiger is. Tiger says, "Little Goat, if you eat lots of mumbo-jumbo you will be good at climbing trees." Little Goat does eat lots of mumbo-jumbo. What comes next?

_____

_____

4. Look at Big Bear. If Big Bear goes, "Woof, woof," Little Goat will go and have his nap, like this. Big Bear does go, "Woof, woof." What comes next?

_____

_____

5. Big Bear is sick. He has an ow-ow-ow in his tummy. Little Goat says, "Big Bear, if you go to the doctor, he will make that ow-ow-ow go away." Big Bear does not go to the doctor. What comes next?

_____

_____

6. Look at Tiger. He is playing with Big Bear. If Tiger says, "Climpy-Clompy," Big Bear will say, "What a big Tiger you are." Tiger does say, "Climpy-Climpy." What comes next?

_____

_____

DOLL PLAY (1-10)

Name _____ Score _____

Date _____ Administered by _____

1. Joan and Betty are playing Spin-Around. They spin around as fast as they can. Joan spins too close to Betty and hits Betty. Betty says, "Oh, that hurt."
What should Joan do after she hits Betty?

_____

What does Betty do when Joan hits her?

_____

2. Joan has a new doll. Betty sees the doll and likes it. Betty says, "May I play with your new doll, please?" Joan says, "No, I want to play with it."
What should Betty do when Joan says, "No"?

_____

What does Joan do then?

_____

3. Betty and Joan are playing Tag. They take turns chasing one another. Joan starts to chase Betty. Then Betty gets mad and hits Joan and says, "It's my turn now, not yours." Joan says, "Oh, that hurts."
What should Betty do now?

_____

What does Joan do?

_____

4. Tommy and Billy are playing. Tommy starts shouting and acting silly, ruining the game.
What should Billy do when Tommy starts acting silly?

_____

What does Tommy do then?

_____

5. Joan has a box that's very heavy. She has to move it inside in case it rains. She tries to push it and pull it but cannot move it very far. Here comes Betty.
What should Joan do?

_____

What does Betty do?

_____

6. Tommy comes to play. He calls Billy to come, too. Billy runs over so fast he bumps into Tommy and knocks him down.
What should Billy do when he knocks Tommy down?

_____

What does Tommy do when Billy knocks him down?

_____

7. Tommy has some paper to make an airplane. Billy comes along and wants to make an airplane, too.
What should Billy do to get some paper?

_____

What does Tommy do then?

_____

DOLL PLAY (1-10) Name _____

8. Mrs. Brown lends Joan a tea-set to play with. Joan plays and has fun. Mrs. Brown says, "I need the tea-set now, please bring it here." Joan gets mad and kicks the tea-set.
What should Joan do next?

_____

What does Mrs. Brown do?

_____

9. Tommy's Dad is calling him. Tommy can't hear him because he is playing a long way away. Tommy comes home to get some more toys and his Dad says, "You bad boy, I called and called and you didn't come."
What should Tommy say?

_____

What should Tommy's Dad say?

_____

10. Billy has lost a nickel and he is looking all over the ground for it. He has to find it because it's the change for his Mother. Tommy comes along to play.
What should Billy do?

_____

What does Tommy do?

_____

LIVE MODELS

Name _____ Score _____

Date _____ Administered by _____

1. B has a new storybook. Here comes A. A says, "May I look at your new book, please?" B hands the book to A and A accidentally drops it.
What should A do when she drops the book?

_____

What does B do?

_____

2. A has a box of small toys. B comes along, looks at them, then turns away and says out loud, but to herself, "I wish I had one of those toys."
What should B do?

_____

What does A do then?

_____

3. A is crayoning a picture. B comes to help. B crayons, then says, "That's not the way I want it," and B scribbles all over the picture. A is cross.
What should B do then?

_____

What does A do?

_____

4. B says, "I'll put my special stars for my special picture on the table, while I finish my book." B goes and sits on a distant chair to read.
A comes, sees the stars and takes two.
What should B do when she sees A take the two stars?

_____

What does A do?

_____

5. A is looking at a puzzle. "I want to play with this puzzle," she says, "but I don't know how it works." B comes in and starts tidying the room.
What should A do?

_____

What does B do?

_____

6. A is helping B tape a tear in a piece of paper. A holds the paper and B tapes it. A accidentally steps on B's foot. B stops taping and holds her foot, saying, "That hurt."
What should A do when she steps on B's foot?

_____

What does B do?

_____

7. A has a new magazine. B says, "May I look at your magazine, please?"
A says, "No, I haven't finished it yet."
What should B do when A doesn't give her the magazine?

_____

What does A do then?

_____

"

LIVE MODELS Name _____

8. A is finishing reading a book. B is waiting for A because A is going to help B tidy the room. B doesn't like waiting, so she says, "Hurry up, A," and pushes A so that the book falls to the ground.
What should B do?

_____

What does A do then?

_____

9. A is helping B tape squares of paper on the wall. B shows A that the squares should be straight. A puts up the squares quite crooked. B says, "That's wrong, please put the squares up straight."
What should A do now?

_____

What should B do now?

_____

10. A is drawing a picture of the jungle. She says, "I want to have a tiger in the picture but I do not know how to draw a tiger." Here comes B.
What should A do?

_____

What should B do?

_____

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